Article

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Bioassay-guided Isolation and Antioxidant Activity of Sulfur-containing Compounds from *Clinacanthus nutans*

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Clinacanthus nutans has been used in traditional herbal medicine for cancer prevention, but the specific bioactive compounds responsible for the observed activities have not been explored. Different polar solvents such as methanol, chloroform, ethyl acetate, and hexane were used for the extraction. The extracts, fractions, and isolated compounds were subjected to DPPH and ferric reducing antioxidant potential (FRAP) assays. Methanol extracts show significant free-radical scavenging activity of 69.09% in DPPH and 56.49% FRAP. Purification of MeOH extracts afforded the fraction FB28 and two new sulfur-containing compounds, named clinamide D and E (**1**, **2**). Compound (**1**) proved to be more active with an IC_{50} value for DPPH radical scavenging of 118.27 ± 0.01 μg/mL and reduction of Fe^{3+}–TPTZ complex of 386.24 ± 0.02, higher than that of the standard ascorbic acid. Sulfur-containing compounds isolated from *C. nutans* is a potential natural antioxidant.

Keywords: *Clinacanthus nutans*; Sulfur-containing compounds; Antioxidant; Belalai gajah.

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